Projacs
an egis company

بروجاكس للتدريب والتطوير

Projacs Training and Development

Managing & Supervising Projects, Consultants & Contractors

Certified Program

إدارة المشاريع والإشراف على الاستشاريين والمقاولين

14 – 18 July 2019

Dubai / United Arab Emirates

A Member of:

PROJACS ACADEMY

ProjacsAcademy.com

Introduction

Construction projects, consultants and contractors have to be managed and supervised daily by good systems and experienced and qualified construction client representative engineers. The course is primarily aimed at people already working in a supervisory or management role within the construction industry. To achieve these qualifications, supervisors or managers have to provide satisfactory evidence of their management skills, as well as their technical knowledge and competence in the workplace and ability in supervising or managing a construction operation.

Objectives

By the end of this course practitioners shall learn to:

Objectives:

The main objectives of this course is to enhance the participant's knowledge, abilities and skills necessary to increase his value to his organization and enhance his career as a supervisor in engineering projects. Also present and discuss the Managing and Supervising Projects, Consultants and Contractors during the different phases of the project. Such projects involve much time and expense, and close management control of them is required if they are to be completed within the established time, cost and quality limitations. Developed and discussed are management techniques directed toward the control of time, cost, quality, resources, and project finance during all phases of the project.

Upon completion of this training course, participants will be able to demonstrate that they can:

- Manage projects, consultants and contractors
- Supervise projects, consultants and contractors
- Organize work operations and activities
- Organize resources for the work
- Monitor and supervise work operations and activities
- Implement health and safety in the workplace
- Maintain team and individual performance
- Establish working relationships
- Plan and implement project maintenance
- Face challenges in moving to supervision
- Build dependable working relationships
- Increase labor productivity and morale
- Avoid claims and legal problems
- Communicate and lead effectively

- Balance managerial skills with technical skills
- Promote team performance
- Increase skill sets in Managing and Supervising Projects, Consultants and Contractors
- Increase their sense of Professionalism
- Increase their Knowledge of Advanced Techniques of Managing and Supervising Projects, Consultants and Contractors
- Increase their ability to lead successful construction sites
- Increase recognition by the organization due to improved performance

Who Should Attend?

This course is recommended for anyone involved with the construction stage of construction, maintenance and repair projects:

- Clients Representatives
- Supervisors
- Engineering Project Managers,
- Team Leaders
- Site Officers and Managers,
- Construction Engineers,
- Technical Professionals
- Operation Supervisors,
- Mechanical Engineers,
- Field Production Supervisor, and
- Project Engineers and Operation Engineers.

Course Outline

Day 1

1. INTRODUCTION TO CONSTRUCTION INDUSTRY:
   - INTRODUCTION
   - THE CONSTRUCTION INDUSTRY
   - THE CONSTRUCTION PROJECT
   - SELECTION OF PROFESSIONAL SERVICES
   - CONSTRUCTION CONTRACTORS
   - LEGAL AND REGULATORY REQUIREMENTS
   - THE PROJECT LIFE CYCLE
   - PROJECT CONSTRUCTION CONTRACTS AND CONTRACTORS SELECTION METHODS
   - MANAGEMENT DURING THE DESIGN PHASE
   - MANAGEMENT OF FIELD CONSTRUCTION
   - THE PROJECT MANAGER

- NEED FOR PROJECT MANAGEMENT
- MANAGEMENT PROCEDURES

2. DEVELOPING THE SUPERVISORY SKILLS IN THE CONSTRUCTION PROJECTS
   - CHALLENGES IN MOVING TO SUPERVISION
   - BUILD DEPENDABLE WORKING RELATIONSHIPS
   - INCREASE WORKER PRODUCTIVITY
   - ENCOURAGE LABORS INITIATIVE
   - AVOID COMPLAINTS AND LEGAL PROBLEMS
   - INCREASE COMMUNICATION AND LEADERSHIP SKILLS
   - THE IMPORTANCE OF BALANCING MANAGERIAL SKILLS WITH TECHNICAL SKILLS
   - PROMOTING OUTSTANDING TEAM PERFORMANCE
   - HOW TO MEDIATE DISPUTES BETWEEN LABORS
   - PLANNING
   - PHYSICAL RESOURCE MANAGEMENT
   - IMPLEMENTING
   - MONITORING AND CONTROL
   - MANAGING TEAMS AND INDIVIDUALS

Day #2

A. Managing Construction Projects

3. PROJECT COST ESTIMATING
   - INTRODUCTION TO COST ESTIMATING
   - ROLE AND QUALIFICATIONS OF COST ENGINEER
   - TYPES OF COST ESTIMATING
   - THE FINAL PROJECT COST ESTIMATES
   - PROJECT BUDGETING
   - UNBALANCED BIDS
   - SETTING OF A COST ESTINATE MODEL
   - COST ESTIMATE COMPUTER PROGRAM
4. THE PROJECT COST CONTROL
   - OBJECTIVES OF COST CONTROL
   - PROJECT COST CONTROL
   - DATA FOR ESTIMATING
   - PROJECT COST CODE
   - USAGE OF PROJECT COST CODE
   - PROJECT COST ACCOUNTING
   - LABOR AND EQUIPMENT COSTS
   - COST ACCOUNTING REPORTS
   - LABOR TIME REPORTING
   - TIME CARD PREPARATION
   - MEASUREMENT OF WORK QUANTITIES
   - WORK QUANTITIES FROM NETWORK ACTIVITIES
   - WEEKLY LABOR COST PEPORT

- WEEKLY LABOR COST REPORT
- COST RECORDS AND REPORTS
- EQUIPMENT COST ACCOUNTING
- CHARGING EQUIPMENT TO THE PROJECT
- EQUIPMENT TIME PEPORTS
- WEEKLY EQUIPMENT COST REPORT
- SPECIAL ASPECTS OF EQUIPMENT CHARGES
- MONTHLY COST FORECAST
- TIME-COST ENVELOPE
- SPECIAL COST ACCOUNTING PROBLEMS
- PRODUCTION COST REDUCTION
- INFORMATION FOR ESTIMATING
- COMPUTER APPLICATION
- ACCURACY OF ESTIMATING

5. CONSTRUCTION PROJECT PLANNING
   - THE CPM PROCEDURE
   - THE PLANNING PHASE
   - JOB ACTIVITIES
   - JOB LOGIC
   - RESTRAINTS
   - PRECEDENCE NOTATION
   - THE PRECEDENCE DIAGRAM
   - LAG RELEATIONSHIPS
   - PRECEDENCE DIAGRAM FOR HIGHWAY BRIDGE
   - REPETITIVE OPERATIONS
   - NETWORK IINTERFACES
   - THE MASTER NETORK
   - SUBNETWORKS
   - DRAWING THE DIAGRAM
6. CONSTRUCTION PROJECT SCHEDULING
   - SCHEDULING PROCEDURE
   - ACTIVITY TIMES
   - RULES FOR ESTIMATING ACTIVITY DURATIONS
   - ESTIMATING ACTIVITY DURATIONS
   - TIME CONTINGENCY
   - NETWORK COMPUTATIONS
   - EARLY ACTIVITY TIMES
   - PROJECT DURATION
   - LATE ACTIVITY TIMES
   - TOTAL FLOAT
   - THE CRITICAL PATH
   - FREE FLOAT
   - ACTIVITY TIMES IN TABULAR FORMAT
   - FLOAT PATHS

- EARLY START SCHEDULE
- ACTIVITIES AND CALENDAR DATES
- SORTS
- LAGS BETWEEN ACTIVITIES
- HAMMOCK ACTIVITY
- MILESTIONS
- TIME-SCALED NETWORKS
- BAR CHARTS

7. PROJECT TIME REDUCTION
   - TIME SCHEDULE ADJUSTMENTS
   - NEED FOR TIME REDUCTION
   - GENERAL TIME REDUCTION PROCEDURE
   - SHORTENING HHE LONGEST TIME PATH
   - PROJECT DIRECT COSTS
   - VARIATION OF ACTIVITY DIRECT COST WITH TIME
   - PROJECT INDIRECT COSTS
   - TIME-COST TRADEOFF BY COMPUTER
   - RESTUDY OF CRITICAL ACTIVITY DURATIONS
   - RESTUDY OF PROJECT PLAN
   - CRITICAL ACTIVITIES IN PARALLEL
   - SUBDIVISION OF CRITICAL ACTIVITIES
   - SBCONTRACTING
   - THE CRITICAL PATH METHOD (CPM) OF TIME-COST TRADE-OFFS
8. PROJECT TIME MANAGEMENT
   - THE TIME MANAGEMENT SYSTEM
   - ASPECTS OF TIME MANAGEMENT
   - PROGRESS MEASUREMENT
   - HIGHWAY BRIDGE AS OF JULY 14
   - JULY 21 STATUS OF HIGHWAY BRIDGE
   - PROGRESS ANALYSIS
   - CORRECTIVE ACTION
   - NETWORK UPDATING
   - PROJECT PROGRESS CURVES
9. PROJECT FINANCIAL MANAGEMENT
   - FINANCIAL CONTROL
   - PROGRESS PAYMENTS
   - PAYMENT REQUESTS FOR UNIT-PRICE CONTRACTS
   - SCHEDULE OF FOR PAYMENTS BY OWNER-UNIT-PRICE CONTRACT
   - FINAL PAYMENT
   - CASH FLOW
   - CASH DISBURSEMENT FORECASTS
   - CASH INCOME FORECASTS
   - CONSTRUCTION FINANCING FOR CONTRACTORS
   - EFFECTS OF OTHER FACTORS ON A CONTRACTOR'S PROFITS

10. QUALITY MANAGEMENT PLANS
    - QUALITY: AN OVERVIEW
    - QUALITY CONTROL (QC
    - QUALITY ASSURANCE (QA
    - TOTAL QUALITY MANAGEMENT
    - TOTAL QUALITY MANAGEMENT
    - PRE-DESIGN PHASE
    - DESIGN PHASE
    - TENDERING PHASE
    - CONSTRUCTION PHASE
    - POST-CONSTRUCTION PHASE
    - OBJECTIVES OF QUALITY PLAN
    - METHODOLOGY OF QUALITY PLAN
    - ANALYSIS AND EVALUATION
    - EVALUATION MATRIX
    - TOTAL QUALITY CONTROL
    - QUALITY CONTROL BY STATISTICAL METHODS
    - STATISTICAL QUALITY CONTROL WITH SAMPLING BY ATTRIBUTES
    - STATISTICAL QUALITY CONTROL WITH SAMPLING BY VARIABLES

Day #3

B. Managing Construction Consultants

11. CONSTRUCTION CLAIMS AND DISPUTES
    - INTRODUCTION
    - CLAIM DEFINITION
    - CLAIMS REASONS AND SOURCES
    - VARIOUS TYPES OF CLAIMS
    - CONTRACTOR'S CONSTRUCTION CLAIMS AVOIDANCE
    - LIFE CYCLE OF CONSTRUCTION CLAIMS
    - CASE STUDIES OF CONSTRUCTION CLAIMS
12. VALUE ENGINEERING
    - HISTORY OF VALUE ENGINEERING
    - BENEFITS AND APPLICATION OF VALUE ENGINEERING
    - VALUE ENGINEERING METHODOLOGY
    - SPECIAL TECHNIQUES FOR PROJECT SELECTION
    - OTHER VE METHODOLOGIES
    - VALUE ENGINEERING PRACTICE
    - VALUE ENGINEERING RESULTS
13. KEY PERFORMANCE INDICATORS (KPI's)
    - WHAT IS A "BALANCED SCORECARD"?
    - MAKING THE BSC A STRATEGIC TOOL
    - HR MEASURES FOR A BSC
    - PERFORMANCE MEASUREMENTS
        - WHY MEASURE PERFORMANCE

- WHAT TO MEASURE
- HOW TO MEASURE
- FEEDBACK TO SUPPLIERS REGARDING PERFORMANCE

C. Managing Construction Contractors

14. CONTRACT FUNDAMENTALS
    - THE ELEMENTS OF A CONTRACT
    - TYPES OF CONTRACTS AND THEIR ADVANTAGES AND DISADVANTAGES
    - FORMS OF CONTRACT
    - IDENTIFICATION OF CONTRACT TERMS
    - TERMS AND CONDITIONS OF CONTRACT
15. CONSTRUCTION MANAGEMENT SAFETY
    - ORGANIZE WORK OPERATIONS AND ACTIVITIES
    - ORGANIZE RESOURCES FOR THE WORK
    - MONITOR AND SUPERVISE WORK OPERATIONS AND ACTIVITIES
    - MAINTAIN TEAM AND INDIVIDUAL PERFORMANCE
    - ESTABLISH WORKING RELATIONSHIPS
    - HEALTH AND SAFETY INCLUDING MANAGEMENT OF HEALTH.
    - COVERAGE OF ALL REGULATION RELATING TO THE CONSTRUCTION INDUSTRY.
    - ACCIDENT PREVENTION, INVESTIGATION AND REPORTING PROCEDURES.
    - OCCUPATIONAL HEALTH AND HYGIENE – PERSONAL PROTECTION.
    - GENERAL HAZARD IDENTIFICATION AND SAFE WORKING METHODS
    - IDENTIFY HAZARDS AND REDUCE RISKS
    - OVERVIEW OF SAFETY IN CONSTRUCTION PROJECTS
    - DESIGN OF SAFETY PLAN AND FIRE PLAN
    - CASE STUDY OF SAFETY PLAN AND FIRE PLAN

Day #4

D. Supervising Construction Projects

16. PROJECT NEGOTIATION
    - INTRODUCTION
    - FUNDAMENTAL KNOWLEDGE OF NEGOTIATION
    - AGREEMENT / BREACH
    - COROLLARIES / RESULTS
    - PRINCIPLES AND COROLLARIES ABOUT NEGOTIATION
    - (CAUSE – EFFECT)
    - "THE NEGOTIATION IS NOT AN EXACT SCIENCE"
    - PRINCIPLES AND COROLLARIES ABOUT NEGOTIATION
    - NEGOTIATION CHARACTERISTIS
    - NEGOTIATION ELEMENTS STUDY IN EMIRATES
    - NEGOTIATION ITEMS
17. ORGANIZING FOR PROJECT MANAGEMENT
    - WHAT IS PROJECT MANAGEMENT?

- TRENDS IN MODERN MANAGEMENT
- STRATEGIC PLANNING AND PROJECT PROGRAMMING
- EFFECTS OF PROJECT RISKS ON ORGANIZATION
- ORGANIZATION OF PROJECT PARTICIPANTS
- TRADITIONAL DESIGNER-CONSTRUCTOR SEQUENCE
- PROFESSIONAL CONSTRUCTION MANAGEMENT
- OWNER-BUILDER OPERATION
- TURNKEY OPERATION
- LEADERSHIP AND MOTIVATION FOR THE PROJECT TEAM
- INTERPERSONAL BEHAVIOR IN PROJECT ORGANIZATIONS
- PERCEPTIONS OF OWNERS AND CONTRACTORS

E. Supervising Construction Consultants

18. DRAWINGS AND SPECIFICATIONS
    - THE ARCHITECT-ENGINEER
    - SERVICES PROVIDED BY THE ARCHITECT-ENGINEER
    - PROJECT DESCRIPTION
    - THE DRAWINGS
    - STANDARDIZED DRAWINGS
    - THE SPECIFICATIONS
    - WORK AND MATERIAL SPECIFICATIONS
    - SPECIFIACATIONS DIVISIONS
    - THE GENERAL CONDITIONS
    - SUPPLEMENTARY CONDITIONS
    - THE TECHNICAL SPECIFICATIONS
    - PERFORMANE SPECIFICATIONS
    - DESIGN SPECIFICATION
    - MATERIAL AND PRODUCT STANDARDS
    - CLOSED SPECIFICATIONS
    - OPEN SPECIFICATIONS
    - OTHER MATERIAL SPECIFICATION TYPES
    - STANDARD SPECIFICATOINS
19. CONSTRUCTION PRICING
    - PRICING FOR CONSTRUCTED FACILITIES
    - RELATIVE COSTS OF CONSTRUCTION CONTRACTS
    - PRINCIPLES OF COMPETITIVE BIDDING
    - PRINCIPLES OF CONTRACT NEGOTIATION
20. METHODS FOR BID EVALUATION
    - CLASSIFICATION OF METHODS FOR CONTRACTORS SELECTION
    - EVALUATION OF COMPETITIVE BIDS
    - PROPOSED METHODOLOGY FOR CONTRACTOR SELECTION
    - PROPOSED METHODOLOGY FOR CONTRACTOR SELECTION
    - COMPUTER PROGRAMMING AND IMPLEMENTATION

21. REVIEW OF THE DIFFERENT APPLIED DESIGN MANAGEMENT MODELS FOR CONSTRUCTION PROJECTS:
    - INTRODUCTION
    - DESIGN MANAGEMENT VS. CONSTRUCTION MANAGEMENT
    - CHARACTERISTICS OF DESIGN MANAGEMENT
    - DESIGN MANAGEMENT PHASES
    - THINKING TO BUILD A SIMPLE MODEL OF DESIGN
    - RESEARCHES REVIEW IN DESIGN MANAGEMENT
    - CONVENTIONAL DESIGN PROCESS IN CONSTRUCTION
    - PROCESS-PARAMETER-INTERFACE MODEL
    - CASE STUDY: DESIGN OF A CONFERENCE ROOM
    - DESIGN REVIEWS IN THE CONSTRUCTION PROCESS
    - CONCURRENT ENGINEERING APPROACH TO REDUCING DESIGN DELIVERY TIME
    - DIFFERENT CASE STUDIES
22. TENDERING PROCEDURES
    - PROJECT STRATEGY
    - PREQUALIFICATION OF TENDERERS
    - OBTAINING TENDERS
    - OPENING OF TENDERS
    - EVALUATION OF TENDERS
    - AWARD OF CONTRACTS

Day #5

F. Supervising Construction Contractors

23. CONSTRUCTION EQUIPMENT MANAGEMENT
    - CONSTRUCTION EQUIPMENT SELECTION FACTORS
    - COST OF OWNING AND OPERATING CONSTRUCTION EQUIPMENT
    - SOURCES OF CONSTRUCTION EQUIPMENT
    - ECONOMIC LIFE OF CONSTRUCTION EQUIPMENT
    - PRODUCTION CYCLE & OUTPUT
24. CONSTRUCTION LABOR MANAGEMENT
    - PERFORMANCE MEASUREMENTS
    - LEVEL OF PERFORMANCE MEASUREMENTS
    - SETTING WORTHY STANDARDS
    - SETTING IMPROVEMENT PRIORITIES
    - PERFORMANCE IMPROVEMENT PHILOSOPHY
    - PERFORMANCE ANALYSIS
    - WORTH OF PERFORMANCE

Training Method

- Pre-assessment
- Live group instruction
- Use of real-world examples, case studies and exercises
- Interactive participation and discussion
- Power point presentation, LCD and flip chart
- Group activities and tests
- Each participant receives a binder containing a copy of the presentation
- slides and handouts
- Post-assessment

Program Support

This program is supported by interactive discussions, role-play, and case studies and highlight the techniques available to the participants.

Schedule

The course agenda will be as follows:

- Technical Session 08.30-10.00 am
- Coffee Break 10.00-10.15 am
- Technical Session 10.15-12.15 noon
- Coffee Break 12.15-12.45 pm
- Technical Session 12.45-02.30 pm
- Course Ends 02.30 pm

Course Fees*

- **2,950USD**
  **VAT is Excluded If Applicable*

مقدمة

مشاريع البناء ، والاستشاريين والمقاولين يجب أن تكون إدارتها والإشراف اليومي عليها يتم من قبل أنظمة جيدة والمهندسين ذوي الخبرة والمؤهلين وممثلي البناء لدي العميل. وتهدف الدورة في المقام الأول على الأشخاص الذين يعملون بالفعل في دور رقابي أو إداري في صناعة البناء والتشييد. ولتحقيق هذه المؤهلات علي المشرفين أو المديرين أن يقدموا أدلة مقنعة من مهاراتهم الادارية ، فضلا عن معرفتهم التقنية والكفاءة في العمل وقدرتهم علي الإشراف أو إدارة عملية البناء.

والإشراف على إدارة المشاريع والتعامل مع أنشطة إدارة المشروع تشمل جمع شرط وتنفيذ مشاريع البناء النهائية على النحو التالي

- الحفاظ على سجلات التقديمات ، والرسومات ، وطلب المعلومات ، والتقارير التي تخص الموقع
- والتنسيق مع العملاء وتنسيق المراسلات ، وكذلك التنسيق بينوالمقاول الرئيسي والاستشاريين والمقاولين من الباطن
- جعل حساب التكلفة للمشاريع الجديدة
- الحصول على الموافقة على المخططات والتشطيبات
- الانتهاء من وثائق البائع بالتشاور مع المتعاونين والموردين الخارجيين والمقاولين والعملاء فيما يتعلق بكافة المعايير المختلفة
- تنفيذ ومراقبة التخطيط الفعال على تنفيذ موقع في مستوى مدير المشروع ووضع حدود نوعية وكمية
- تخصيص الموارد بشكل فعال في تحقيق الاستفادة المثلى من الوقت المتاح لتحسين الربحية

أهداف البرنامج

الأهداف الرئيسية لهذه الدورة هي تعزيز المعرفة والقدرات والمهارات اللازمة لدي المشارك لزيادة قيمة له ولمنظمته وتعزيز مسيرته كمشرف في المشاريع الهندسية. أيضا تقديم والمناقشة والإشراف على إدارة المشاريع والاستشاريين والمقاولين أثناء المراحل المختلفة للمشروع. مثل هذه المشاريع تنطوي على الكثير من الوقت والنفقات ، ومطلوب وثيقة الرقابة الإدارية منها إذا ما أريد لها أن تكتمل في غضون سريعة لضيق الوقت والتكلفة والجودة المعمول بها. فتقنيات الإدارة التي تمت مناقشتها هي موجهة نحو مكافحة تمويل الوقت والتكلفة ، والجودة ، والموارد ، والمشروع خلال جميع مراحل المشروع.

عند الانتهاء من هذه الدورة التدريبية ، سيتمكن المشاركون من:

- إدارة المشاريع والاستشاريين والمقاولين
- الإشراف على المشاريع ، والاستشاريين والمقاولين
- تنظيم عمليات العمل والأنشطة

- تنظيم الموارد اللازمة للعمل
- رصد ومراقبة عمليات العمل والأنشطة
- تطبيق الصحة والسلامة في مكان العمل
- الحفاظ على فريق العمل والأداء الفردي
- إقامة علاقات عمل
- تخطيط وتنفيذ مشروع الصيانة
- مواجهة التحديات في الانتقال للإشراف
- بناء علاقات عمل والاعتماد عليها
- زيادة إنتاجية العمل والروح المعنوية
- تجنب المطالبات والمشاكل القانونية
- التواصل
- توازن المهارات الإدارية مع المهارات التقنية
- تعزيز أداء الفريق
- زيادة المهارات في إدارة والإشراف على المشاريع والاستشاريون والمقاولون
- زيادة شعورهم بالاحتراف
- زيادة معرفتهم لتقنيات متقدمة لإدارة والإشراف على المشاريع والاستشاريون والمقاولون
- زيادة قدرتهم على قيادة ناجحة لمواقع البناء
- زيادة اعتراف المنظمة نظرا لتحسن الأداء

الحضور

ويوصى هذا البرنامج الدراسي من أجل أي شخص متورط في مرحلة مشاريع البناء والصيانة والإصلاح وكذلك:

- المشرفون
- مدراء المشاريع الهندسية
- طاقم الفريق
- ضباط الموقع والمديرين
- مهندسي البناء
- الفنيين

- المشرفون علي العمليات
- المهندسين الميكانيكيين
- المشرفين على إنتاج الحقل
- مهندسي المشاريع ومهندسي العمليا